Completed Pollution Prevention Project Case Study

United States Department of Energy
Office of Environmental Management
Fact Sheet

Removal of PCBs from Wastewater Sludge

Los Alamos National Laboratory

Original Problem

The Toxic Substances Control Act (TSCA) requires waste containing polychlorinated biphenyls (PCBs) to be handled in a special way. Testing in the past revealed that the sludge generated by treating wastewater from LANL contained trace levels of PCBs that qualified the sludge as TSCA waste. Additional paperwork and expenses are involved with meeting the special requirements of TSCA. Although PCB-containing materials have not been purchased by LANL since their production in the U.S. was banned, PCBs do not degrade easily.

The Project Solution

A team of employees from multiple divisions collaborated to compile past testing records. New testing in the sewer lines was also performed, and then over 40 miles of the pipes were cleaned with high-pressure water jets. After the PCB-contaminated material was removed, the wastewater sludge no longer had to be handled as TSCA waste. This classification change eliminated the paperwork and extra expense associated with TSCA waste.

Value of Improvement

The clean sewer lines will prevent future sludge from the wastewater treatment plant from becoming classified as TSCA waste. By not needing to classify the wastewater sludge as TSCA waste, LANL will save about $7000 per ton disposed. The reduction in paperwork will save administrative time as well.

Lifecycle Waste Reduction	
Lifecycle Waste Reduction	23.5 tons in 2000
Commencement Date	1996
Project Useful Life (Years)	Indefinite

DOE Monetary Benefits	
Total Project Cost	NA
Lifecycle Savings	~$7000 per ton of sludge
Return on Investment	NA

Benefits At-A-Glance

- In 2000, 23.5 tons of sludge from the wastewater treatment plant did not have to be classified as TSCA waste.
- The clean sewer lines will prevent future sludge from being contaminated with PCBs and becoming TSCA waste.
- By not having to classify the wastewater sludge as TSCA waste, about $7000 will be saved for every ton of sludge.

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Summary Data	
Priority Area:	Waste Minimization Projects
Project Type:	Process Redesign
Total Project Cost:	NA
Lifecycle Savings:	~$7000 per ton of sludge
Implementing Groups:	JCNNM / ESH-18 / ESH-19
Benefiting Group:	SWS facility at TA-46
Useful Life Years:	Indefinite
Return on Investment:	NA
Lifecycle Waste Reduction:	23.5 tons of sludge were disposed of as non-TSCA waste in 2000.
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